

Navy Advancement Center

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Advancement Handbook for DAMAGE CONTROLMAN

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PREFACE

The purpose of the Advancement Handbook is to help you focus your preparation for Navywide advancement-in-rating examinations. The bibliographies (BIBs) together with this handbook form a comprehensive examination study package. Since this handbook provides skill and knowledge components for each paygrade of the Damage Controlman (DC) rating, it helps you concentrate your study on those areas that may be tested. This feature will help you get the most out of your study time.

Each page in Parts 1 through 4 of this Advancement Handbook presents general skill areas, specific skill areas, the knowledge factors associated with each skill area, the pertinent references that address each skill, and the subject areas that may be covered on the examination. The skill statements describe the skills you are expected to perform for each paygrade. The skill statements are cumulative; that is, you are responsible for the skills for the paygrade you are competing for, your present paygrade, and all paygrades below.

Although this handbook is very comprehensive, it cannot cover all the tasks performed in the rating. As a result, the advancement examinations may contain questions more detailed than described in the “*Exam Expectations*” section of the skill areas.

Remember that advancement competition is keen, so your keys to advancement include not only comprehensive advancement examination study but also sustained superior performance.

Prepared by
Navy Advancement Center Department,
Naval Education and Training Professional
Development and Technology Center

THE UNITED STATES NAVY

GUARDIAN OF OUR COUNTRY

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends; the United States Navy exists to make it so.

WE SERVE WITH HONOR

Tradition, valor, and victory are the Navy's heritage from the past. To these may be added dedication, discipline, and vigilance as the watchwords of the present and the future.

At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families.

Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

THE FUTURE OF THE NAVY

The Navy will always employ new weapons, new techniques, and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war.

Mobility, surprise, dispersal, and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past.

Never have our opportunities and our responsibilities been greater.

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Part 1

Advancement Handbook for DC3

Advancement Handbook for DC3

General DC <i>Skill Area</i>	FIRE FIGHTING
A <i>skill</i> you are expected to perform from the General Skill Area above:	Operate installed fire extinguishing systems in accordance with PMS
<i>Knowledge</i> you should have to perform this skill:	<p>Recall requirements and procedures for operation of installed fire extinguishing systems to include the following:</p> <ul style="list-style-type: none"> • Alignment of aqueous film forming foam (AFFF), Halon, CO₂, APC, water sprinkler, and water mist fire systems • Activation of the AFFF, Halon, CO₂, APC, water sprinkler, and water mist fire systems
<i>References</i> you should study To gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NSTM Chap 079, Vol. 2, Damage Control-Practical Damage Control, NAVSEA S9086-CN-STM-020 • Range Guard Fire Extinguishing Systems, NAVSEA SS100-AC-MMA-010/AUTO-MAN • NSTM Chap 505, Piping Systems, NAVSEA S9086-RK-STM-010 • NSTM Chap 555, Vol.1, Surface Ship Fire Fighting, S9086-S3-STM-010/CH-555 • Planned Maintenance System, OPNAVINST 4790.4 (series)
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about the names and functions of the components of installed fire extinguishing systems and the requirements for proper system alignment and activation procedures for these systems.

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General DC <i>Skill Area</i>	FIRE FIGHTING
<i>A skill</i> you are expected to perform from the General Skill Area above:	Troubleshoot installed fire extinguishing systems
<i>Knowledge</i> you should have to perform this skill:	<p>Recall requirements and procedures for troubleshooting installed fire extinguishing systems to include the following:</p> <ul style="list-style-type: none"> • Aqueous film forming foam (AFFF) • Halon • CO₂ • APC • Water sprinkler system • Water mist fire system
<i>References</i> you should study To gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Planned Maintenance System, OPNAVINST 4790.4 (series) • Range Guard Fire Extinguishing Systems, NAVSEA SS100-AC-MMA-010/AUTO-MAN • NSTM Chap 505, Piping Systems, NAVSEA S9086-RK-STM-010 • NSTM Chap 555, Volume 1, Surface Ship Fire Fighting, S9086-S3-STM-010/CH-555 • Fire Extinguishing System Deep Fat & Doughnut Fryer, S 9555-AR-MMO-010 • Fire Extinguishing System, Twin Agent (AFFF & PKP) and Single Agent (AFFF)S 9555-AY-MMA-010 • Halon Fire Extinguishing Components, S9555-AP-MMO-010 • Carbon Dioxide Fire Extinguishing System, Fixed Pipe and Hosereel, 0993-LP-005-1010 • Magazine Sprinkling Systems Description, Operation, and Maintenance, S 9522-AA-HBK-010
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about the proper troubleshooting procedures for the various installed fire extinguishing systems.

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General DC <i>Skill Area</i>	FIRE FIGHTING
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform duties of emergency team member
<i>Knowledge</i> you should have to perform this skill:	<p>Recall duties and responsibilities of emergency team members to include the following:</p> <ul style="list-style-type: none"> • Investigate and report fire conditions • Locate fires/hot spots using naval firefighting thermal imager (NFTI) • Don and doff firefighting ensemble • Set reflash watches • Direct fire parties
<i>References</i> you should study To gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NSTM Chap 079, Vol. 2, Damage Control- Practical Damage Control-NAVSEA S9086-CN-STM-020 • NSTM Chap 555, Vol.1, Surface Ship Fire Fighting, S9086-S3-STM-010/CH-555,V1
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about the duties of an emergency team member and the emergency equipment the member uses.

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General DC <i>Skill Area</i>	EQUIPMENT MAINTENANCE
<i>A skill</i> you are expected to perform from the General Skill Area above:	Maintain and repair AFFF and HCFF stations in accordance with PMS
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the PMS requirements and procedures for the maintenance and repair of AFFF and HCFF stations to include the following:</p> <ul style="list-style-type: none"> • Components of AFFF and HCFF systems and their lineup. • Obtain and test AFFF samples • Inspect AFFF level in solution tanks • Replace AFFF in solution tanks • Clean and inspect AFFF pumps • Lubricate AFFF concentrate pumps • Repair and test AFFF concentrate pumps • Clean and lubricate AFFF system valves • Repair and test AFFF system valves • Clean and inspect AFFF hose reels • Lubricate and test AFFF hose reels • Perform hydrostatic test on AFFF hoses • Repair AFFF hose reels • Clean and inspect variable nozzles • Inspect and test AFFF piping and sprinkler heads • Replace components of AFFF stations • Inspect Fixed-System discharge nozzles
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Planned Maintenance System, OPNAVINST 4790.4 (series) • NSTM 555, Vol.1, Surface Ship Fire Fighting, S9086-S3-STM-010/CH-555V1 • Fire Extinguishing System Twin Agent (AFFF & PKP) and Single Agent (AFFF) S 9555-AY-MMA-010
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about AFFF and HCFF systems and their components and lineup. Also questions about system inspection and activation and proper sampling of solutions from the systems.

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General DC <i>Skill Area</i>	EQUIPMENT MAINTENANCE
A <i>skill</i> you are expected to perform from the General Skill Area above:	Maintain and repair Halon systems in accordance with PMS
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the PMS requirements and procedures for the maintenance and repair of Halon systems to include the following:</p> <ul style="list-style-type: none"> • Clean and inspect components of Halon systems • Test and replace components of Halon systems • Record pressure readings • Replace bottles • Test Halon bottles for proper liquid level • Record Halon pressure readings • Test Halon systems • Weigh Halon bottles and cylinders • Replace Halon bottles and cylinders • Inspect Fixed-System discharge nozzles
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Planned Maintenance System, OPNAVINST 4790.4 (series) • NSTM 555, Vol.1, Surface Ship Fire Fighting, S9086-S3-STM-010/CH-555V1 • Halon Fire Extinguishing Components, S 9555-AP-MMO-010
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about Halon systems to include inspection, component repair or replacement, and system testing.

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General DC <i>Skill Area</i>	EQUIPMENT MAINTENANCE
A <i>skill</i> you are expected to perform from the General Skill Area above:	Maintain and repair aqueous potassium carbonate (APC) systems in accordance with PMS
<i>Knowledge</i> you should have to perform this skill:	<p>Recall requirements and procedures for the maintenance and repair of aqueous potassium carbonate (APC) systems to include the following:</p> <ul style="list-style-type: none"> • Clean and inspect components of APC systems • Test and replace components of APC systems • Record pressure readings • Replace bottles • Inspect Fixed-System discharge nozzles
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Planned Maintenance System, OPNAVINST 4790.4 (series) • NSTM 555, Vol.1, Surface Ship Fire Fighting, S9086-S3-STM-010/CH-555V1 • Range Guard Fire Extinguishing Systems, SS100-AC-MMA-010
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about APC systems to include inspection, component repair or replacement, and system testing.

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General DC <i>Skill Area</i>	EQUIPMENT MAINTENANCE
<i>A skill</i> you are expected to perform from the General Skill Area above:	Inspect, maintain, and refill portable fire extinguishers in accordance with PMS
<i>Knowledge</i> you should have to perform this skill:	<p>Recall requirements and procedures for inspecting, maintaining, and refilling portable fire extinguishers in accordance with PMS to include the following:</p> <ul style="list-style-type: none"> • Inspect portable fire extinguishers (CO₂, PKP, AFFF) • Replace components of portable fire extinguishers (CO₂, PKP, AFFF) • Clean and inspect CO₂ transfer units • Lubricate and test CO₂ transfer units • Replace components CO₂ transfer unit • Recharge CO₂ bottles • Fill Purple-K-Powder (PKP) bottles • Replace CO₂ cartridge in PKP bottles • Refill AFFF bottles • Pressurize AFFF bottles
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Planned Maintenance System, OPNAVINST 4790.4 (series) • NSTM 555, Vol.1, Surface Ship Fire Fighting, S9086-S3-STM-010/CH-555V1
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about portable bottle inspection requirements and component repair or replacement. Also, questions about standards and the various types and sizes of bottles and the procedures for re-charging systems for carbon dioxide, Halon, and portable AFFF bottles.

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General DC <i>Skill Area</i>	EQUIPMENT MAINTENANCE
<i>A skill</i> you are expected to perform from the General Skill Area above:	Maintain and repair sprinkler and washdown systems in accordance with PMS
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> • Test and inspect sprinkler and water washdown systems • Repair or replace components of sprinkler and water washdown systems • Activate sprinkler and water washdown systems • Inspect Fixed-System discharge nozzles
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Planned Maintenance System, OPNAVINST 4790.4 (series) • NSTM 555, Volume 1, Surface Ship Fire Fighting, S9086-S3-STM-010/CH-555V1 • Magazine Sprinkling Systems Description, Operation, and Maintenance, S9522-AA-HBK-010
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about sprinkler and washdown systems to include inspection, component repair or replacement, and system testing.

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General DC <i>Skill Area</i>	EQUIPMENT MAINTENANCE
<i>A skill</i> you are expected to perform from the General Skill Area above:	Inventory all repair locker equipment in accordance with PMS
<i>Knowledge</i> you should have to perform this skill:	Recall inventory requirements for repair lockers/damage control repair stations (DCRS).
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Ship's current AEL • Planned Maintenance System, OPNAVINST 4790.4 (series) • NSTM 555, Vol.1, Surface Ship Fire Fighting, S9086-S3-STM-010/CH-555V1 • NSTM 077, Personnel Protection Equipment, S9086-CL-STM-010/CH-077
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about any equipment that may be contained in a generic repair locker or damage control repair station (DCRS). Also, items that relate to inspection and marking requirements for the equipment in the lockers and stations.

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General DC <i>Skill Area</i>	EQUIPMENT MAINTENANCE
A <i>skill</i> you are expected to perform from the General Skill Area above:	Maintain all repair locker portable equipment in accordance with PMS
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> • Recall requirements and procedures for the maintenance and repair of portable equipment in repair lockers/damage control repair stations (DCRS) to include the following: • AFFF in-line eductors and pickup tubes • Naval Firefighting Thermal Imager (NFTI) • Portable smoke generators • Portable electric desmoking fans and water driven blowers • Flashlights • Damage control headlamps • Battle lanterns • Portable exothermic cutting units (PECU) • Portable hydraulic access/rescue systems (PHARS) • Gas-free engineering test equipment • Gas masks • Portable emergency pumps • Inflatable life vests
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Ship's current AEL • Planned Maintenance System, OPNAVINST 4790.4 (series) • NSTM 555, Vol.1, Surface Ship Fire Fighting, S9086-S3-STM-010/CH-555V1 • NSTM 077, Personnel Protection Equipment, S9086-CL-STM-010/CH-077
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about any equipment that may be contained in a generic repair locker or damage control repair station (DCRS).

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General DC <i>Skill Area</i>	EQUIPMENT MAINTENANCE
<i>A skill you are expected to perform from the General Skill Area above:</i>	Maintain and repair life support equipment in accordance with PMS
<i>Knowledge you should have to perform this skill:</i>	<p>Recall requirements and procedures for maintenance and repair of life support equipment to include the following:</p> <ul style="list-style-type: none"> • Inspect and dispose of emergency escape breathing device (EEBD) • Clean, inspect, and test the oxygen breathing apparatus (OBA) • Replace components of the OBA • Inspect and test OBA audio projection set (APS) • Clean, inspect, and test air line hose masks (ALHM) • Clean and inspect supplemental emergency egress device (SEED) • Clean, inspect, and maintain the self contained breathing device (SCBA) • Clean, inspect, and maintain the supplied air respirator for search and rescue (SAR) SCBA • Clean, inspect, and test ALHM • Replace components of ALHM
<i>References you should study to gain the knowledge you need to perform this skill:</i>	<ul style="list-style-type: none"> • Planned Maintenance System, OPNAVINST 4790.4 (series) • NSTM 555, Vol.1, Surface Ship Fire Fighting, S9086-S3-STM-010/CH-555V1 • NSTM 077, Personnel Protection Equipment, S9086-CL-STM-010/CH-077

<p><i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:</p>	<p>You can expect to be asked questions about the use of any equipment that relates to personnel protection in the area of life support from toxic or noxious gases, vapor hazards, exposure to fire, or an oxygen deficient atmosphere. Also questions that relate to inspection and maintenance of life support equipment.</p>
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General DC <i>Skill Area</i>	EQUIPMENT MAINTENANCE
A <i>skill</i> you are expected to perform from the General Skill Area above:	Conduct hydrostatic test on fire hoses in accordance with PMS
<i>Knowledge</i> you should have to perform this skill:	<ul style="list-style-type: none"> • Identify equipment used to hydro test fire hoses • Identify types and sizes of fire hoses • Inspect and hydrostatically test fire hoses
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • OPNAVINST 4790.4 (series] • NSTM 555, Vol.1, Surface Ship Fire Fighting, S9086-S3-STM-010/CH-555V1
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about various types and sizes of hose. Also, questions on hydrostatic procedures to include the test equipment and required pressure and time.

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General DC <i>Skill Area</i>	EQUIPMENT MAINTENANCE
A <i>skill</i> you are expected to perform from the General Skill Area above:	Maintain and repair installed carbon dioxide (CO₂) systems in accordance with PMS
<i>Knowledge</i> you should have to perform this skill:	<p>Recall requirements and procedures for maintenance and repair of CO₂ systems to include the following:</p> <ul style="list-style-type: none"> • Clean, inspect, and test Fixed CO₂ Systems • Replace components of Fixed CO₂ Systems • Weigh and replace bottles and cylinders • Inspect Fixed CO₂ Systems discharge nozzles
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Planned Maintenance System, OPNAVINST 4790.4 (series) • NSTM 555, Volume 1, Surface Ship Fire Fighting, S9086-S3-STM-010/CH-555V1 • NSTM 077, Personnel Protection Equipment, S9086-CL-STM-010/CH-077 • Carbon Dioxide Fire Extinguishing System, Fixed Pipe and Hosereel
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about the requirements to maintain CO ₂ bottles and the proper component replacement to ensure all safety requirements are met.

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General DC <i>Skill Area</i>	EQUIPMENT MAINTENANCE
A <i>skill</i> you are expected to perform from the General Skill Area above:	Maintain and repair fire station components in accordance with PMS
<i>Knowledge</i> you should have to perform this skill:	<p>Recall requirements and procedures for maintenance and repair of fire station equipment to include the following:</p> <ul style="list-style-type: none"> • Clean and lubricate fire stations • Inspect and test fire stations • Replace components of fire stations • Inspect and hydrostatically test fire hoses • Clean and inspect nozzles
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Planned Maintenance System, OPNAVINST 4790.4 (series) • NSTM 555, Vol.1, Surface Ship Fire Fighting, S9086-S3-STM-010/CH-555V1
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about fire stations and the components associated with them. Also on requirements for cleaning, inspecting and testing fire station equipment.

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General DC <i>Skill Area</i>	EQUIPMENT MAINTENANCE
A <i>skill</i> you are expected to perform from the General Skill Area above:	Maintain assigned system gauges and indicate readings in accordance with PMS
<i>Knowledge</i> you should have to perform this skill:	<p>Recall procedures for the following:</p> <ul style="list-style-type: none"> • Recording pressure readings • Repairing damage control systems in assigned spaces • Inspect and repair gauges
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Planned Maintenance System, OPNAVINST 4790.4 (series) • NSTM 555, Vol.1, Surface Ship Fire Fighting, S9086-S3-STM-010/CH-555V1
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about types of gauges and the systems gauges are used in. Also, questions about inspection and maintenance requirements for gauges.

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General DC <i>Skill Area</i>	EQUIPMENT MAINTENANCE
A <i>skill</i> you are expected to perform from the General Skill Area above:	Maintain and repair eductor systems in accordance with PMS
<i>Knowledge</i> you should have to perform this skill:	<p>Recall requirements and procedures for maintaining and repairing eductor systems to include the following:</p> <ul style="list-style-type: none"> • Clean and inspect installed eductor systems • Test installed eductor systems • Replace components of installed eductor systems • Clean and inspect miscellaneous valve hydraulic control (MVHC) stations • Test and replace components of MVHC stations
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Planned Maintenance System, OPNAVINST 4790.4 (series) • NSTM 505, Piping Systems, S9086-RK-STM-010/CH-505
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about the operation of eductor systems, MVHC stations, and the requirements and procedures for cleaning and inspecting eductors.

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General DC <i>Skill Area</i>	EQUIPMENT MAINTENANCE
<i>A skill</i> you are expected to perform from the General Skill Area above:	Maintain and repair the ship's firemain and firemain flushing system
<i>Knowledge</i> you should have to perform this skill:	<p>Recall requirements and procedures for the maintenance and repair of the ship's firemain and firemain flushing system to include:</p> <ul style="list-style-type: none"> • Clean and inspect components of firemain systems • Lubricate and test components of firemain systems • Replace components of firemain systems • Flush firemain systems • Clean and inspect Y-type strainers • Inspect and test Y-type strainers • Replace components of Y-type strainers • Flush Y-type strainers • Inspect gauges
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Planned Maintenance System, OPNAVINST 4790.4 (series) • NSTM 505, Piping Systems, S9086-RK-STM-010/CH-505 • NSTM 555, Vol.1, Surface Ship Fire Fighting, S9086-S3-STM-010/CH-555V1
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about the operation, cleaning, and testing of firemain systems. Also, questions about the maintenance requirements and procedures for the firemain system and the flushing sub system. In addition, there can be questions on shipboard standard pipe sizes, types, and requirements for normal and emergency repairs.

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General DC <i>Skill Area</i>	EQUIPMENT MAINTENANCE
<i>A skill</i> you are expected to perform from the General Skill Area above:	Maintain and repair the ship's ventilation systems and associated components, valves, closures, and subsystems in accordance with PMS
<i>Knowledge</i> you should have to perform this skill:	<p>Recall requirements and procedures for inspecting, cleaning, and repairing the ship's ventilation system to include:</p> <ul style="list-style-type: none"> • Preheater and reheater coils and fan unit cooling coils • Ventilation pre-heaters • Ventilation ducting • Ventilation dampers and closures • Ventilation air filters • Ventilation weather openings • Collective protection systems (CPS)
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Planned Maintenance System, OPNAVINST 4790.4 (series) • NSTM 079, Vol. 2, Damage Control- Practical Damage Control, S9086-CN-STM-020/CH-079,V2 • NSTM 555, Vol. 1, Surface Ship Fire Fighting, S9086-S3-STM-010/CH-555V1
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about the types of ventilation systems and the inspection and testing of these systems. Also, questions about the requirements for the cleaning and maintenance of ventilation systems and components. In addition, questions about ventilation requirements as they relate to Material Conditions of Readiness and CBR threat levels.

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General DC <i>Skill Area</i>	EQUIPMENT MAINTENANCE
A <i>skill</i> you are expected to perform from the General Skill Area above:	Maintain assigned compartments, tanks and bilges and ensure space tightness in accordance with PMS
<i>Knowledge</i> you should have to perform this skill:	<p>Recall requirements and procedures for the maintenance of assigned compartments, tanks and bilges and ensure space tightness to include the inspection, cleaning, lubrication, testing, and adjustment or repair of the following:</p> <ul style="list-style-type: none"> • Emergency overboard discharge connections • Tanks and voids (ballasting, storage, etc.) • Balanced-type fumetight doors • Watertight doors, hatches, and scuttles • Conduct a compartment visual light leak test
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Planned Maintenance System, OPNAVINST 4790.4 (series) • NSTM 079, Vol. 2, Damage Control- Practical Damage Control, S9086-CN-STM-020/CH-079,V2 • Damage Control Watertight Closures Inspection, Maintenance and Repair Booklet, NAVSEA S9169-AW-DCB-010
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly.	You can expect to be asked questions about the procedures and requirements for inspecting and cleaning and for the maintenance and repair of damage control fittings located in a tank, void, bilge or compartment. Also, questions about the requirements that support preserving spaces.

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General DC <i>Skill Area</i>	EQUIPMENT MAINTENANCE
A <i>skill</i> you are expected to perform from the General Skill Area above:	Maintain and repair ladders and associated components in accordance with PMS
<i>Knowledge</i> you should have to perform this skill:	Recall requirements and procedures for the inspection, maintenance and repair of ladders and associated components.
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> Planned Maintenance System, OPNAVINST 4790.4 (series)
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about requirements for cleaning, inspection, repair, or replacement of incline and vertical ladders or their components as required by PMS.

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General DC <i>Skill Area</i>	EQUIPMENT MAINTENANCE
A <i>skill</i> you are expected to perform from the General Skill Area above:	Inspect compartment using the compartment check off list (CCOL).
<i>Knowledge</i> you should have to perform this skill:	<p>Recall procedures for inspecting a compartment using the compartment check off list (CCOL) to include the following:</p> <ul style="list-style-type: none"> • Inspect compartments and spaces for damage control discrepancies • Inspect damage control communication systems
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Planned Maintenance System, OPNAVINST 4790.4 (series) • NSTM 079, Vol. 2, Damage Control- Practical Damage Control, S9086-CN-STM-020/CH-079,V2 • Surface Ship Survivability, NWP 3-20.31
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	<p>You can expect to be asked questions about compartment and space inspections. Questions may include a working knowledge of the marking and identification requirements of fittings, doors, scuttles, and hatches that are in these spaces. Also, questions about the conditions of watertight fittings and the effects that changing the material condition or steaming condition has on different styles of spaces, and on the requirements for the setting or positioning of items found in a space or compartment).</p>

Advancement Handbook for DC3

General DC <i>Skill Area</i>	EQUIPMENT MAINTENANCE
<i>A skill</i> you are expected to perform from the General Skill Area above:	Maintain and repair collection, holding, and transfer (CHT) systems in accordance with PMS
<i>Knowledge</i> you should have to perform this skill:	<p>Recall requirements and procedures for the maintenance and repair of collection, holding, and transfer (CHT) systems to include the following:</p> <ul style="list-style-type: none"> • Clean and inspect components of CHT systems • Test and replace components of CHT systems • Align CHT systems
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Planned Maintenance System, OPNAVINST 4790.4 (series) • NSTM 593, Pollution Control, S9086-T8-STM-010/CH-593 • NSTM 505, Piping Systems, S9086-RK-STM-010/CH-505 • Applicable (SDOSS) Sewage Disposal Operating Sequencing System
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about CHT system components. Questions may include knowledge of the alignment, maintenance, and repair of these components.

Advancement Handbook for DC3

General DC <i>Skill Area</i>	DAMAGE CONTROL
A <i>skill</i> you are expected to perform from the General Skill Area above:	Qualify as sounding and security watch
<i>Knowledge</i> you should have to perform this skill:	<p>Recall qualification requirements for sounding and security watch to include the following:</p> <ul style="list-style-type: none"> • Take soundings (tanks, voids, compartments, etc.) • Inspect ship for fire hazards and flooding
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Surface Ship Survivability NWP 3-20.31
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about the procedures for taking soundings. Also, questions about proper watch standing procedures and the precautions and other requirements for safe inspection of compartments, tanks, and voids.

Advancement Handbook for DC3

General DC <i>Skill Area</i>	DAMAGE CONTROL
A <i>skill</i> you are expected to perform from the General Skill Area above:	Install pipe patches
<i>Knowledge</i> you should have to perform this skill:	<p>Recall procedures for installing pipe patches to include the following:</p> <ul style="list-style-type: none"> • Install emergency pipe patches • Install hull patches • Plug cracked weld seams
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NSTM 079, Vol. 2, Damage Control- Practical Damage Control, S9086-CN-STM-020/CH-079,V2
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about the various pipe patches used in the fleet today to include the types and systems each can be used on and the capabilities, and limitations of each type of patch.

Advancement Handbook for DC3

General DC <i>Skill Area</i>	DAMAGE CONTROL
A <i>skill</i> you are expected to perform from the General Skill Area above:	Construct shorings
<i>Knowledge</i> you should have to perform this skill:	<p>Recall requirements and procedures for the layout and constructing of shoring to include the following:</p> <ul style="list-style-type: none"> • H-Type • I-Type • K-Type
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NSTM 079, Vol. 2, Damage Control/ Practical Damage Control, S9086-CN-STM-020/CH-079,V2
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about the different styles of shores, material types, and usage. Also, questions about the procedures for layout and erection of shoring material and the capabilities and limitations of shoring types and materials.

Advancement Handbook for DC3

General DC <i>Skill Area</i>	DAMAGE CONTROL
A <i>skill</i> you are expected to perform from the General Skill Area above:	Properly rig power, welding, and emergency communication leads
<i>Knowledge</i> you should have to perform this skill:	<p>Recall procedures for wiring leads to include the following:</p> <ul style="list-style-type: none"> • Power • Emergency communication • Welding
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NSTM 079, Vol. 2, Damage Control- Practical Damage Control, S9086-CN-STM-020/CH-079,V2 • Surface Ship Survivability NWP 3-20.31
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about the safety requirements and procedures for rigging emergency communications, power restoration, and welding leads.

Advancement Handbook for DC3

General DC <i>Skill Area</i>	DAMAGE CONTROL
<i>A skill</i> you are expected to perform from the General Skill Area above:	Direct damage control operations
<i>Knowledge</i> you should have to perform this skill:	<p>Recall requirements and procedures for conducting damage control operations to include the following:</p> <ul style="list-style-type: none"> • Direct damage control repair teams • Communicate via DC communications systems • Prepare messages using damage control reporting symbols • Operate emergency access equipment (PHARS, PECU, etc.) • Dewater spaces using portable eductors and pumps • Dewater spaces using installed eductors
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NSTM 079, Volume 2, Damage Control-Practical Damage Control, S9086-CN-STM-020/CH-079,V2 • Surface Ship Survivability NWP 3-20.31 • NSTM 555, Surface Ship Firefighting, S9086-S3-STM-010/CH-555V1 • NSTM 077, Personnel Protection Equipment, S9086-CL-STM-010/CH-077 • NSTM 505, Piping Systems, S9086-RK-STM-010/CH-505 • OPNAVINST 4790,4 (series)
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about safety precautions and procedures for firefighting, dewatering, damage control communication methods, and personnel protection and emergency access equipment.

Advancement Handbook for DC3

General DC <i>Skill Area</i>	DAMAGE CONTROL
A <i>skill</i> you are expected to perform from the General Skill Area above:	Don and doff personnel protection and emergency access equipment.
<i>Knowledge</i> you should have to perform this skill:	<p>Recall safety precautions and procedures to properly don or doff personnel protection and emergency access equipment to include the following:</p> <ul style="list-style-type: none"> • OBA • SCBA • SAR SCBA
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NSTM 077, Personnel Protection Equipment, S9086-CL-STM-010/CH-077 • Planned Maintenance System, OPNAVINST 4790.4 (series)
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about safety precautions and procedures to properly don or doff personnel protection and emergency access equipment.

Advancement Handbook for DC3

General DC <i>Skill Area</i>	DAMAGE CONTROL
A <i>skill</i> you are expected to perform from the General Skill Area above:	Damage control compartment testing and inspection in accordance with PMS
<i>Knowledge</i> you should have to perform this skill:	<p>Recall safety precautions and procedures for testing and inspecting compartments to include the following:</p> <ul style="list-style-type: none"> • Verify compartment check off lists (CCOL) • Conduct compartment air test
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Planned Maintenance System, OPNAVINST 4790.4 (series) • NSTM 9880, Damage Control Compartment Testing and Inspection, NAVSEA 0901-LP-884-0004 • NSTM 079, Vol. 2, Damage Control- Practical Damage Control, S9086-CN-STM-020/CH-079,V2 • Surface Ship Survivability, NWP 3-20.31
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about safety precautions and procedures for testing and inspecting compartments.

Advancement Handbook for DC3

General DC <i>Skill Area</i>	CHEMICAL, BIOLOGICAL, AND RADIOLOGICAL (CBR) DEFENSE
A <i>skill</i> you are expected to perform from the General Skill Area above:	Chemical protective overgarment
<i>Knowledge</i> you should have to perform this skill:	Recall procedures for the proper donning and doffing of the chemical protective overgarment.
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • U.S. Navy CBR Defense U.S. Marine Corps NBC Defense Handbook, OPNAV P-86-1-95 • NSTM 470, Shipboard BW/CW Defense And Countermeasures, S9086-QH-STM-010/CH-470 • Surface Ship Survivability NWP 3-20.31
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about proper donning and doffing of chemical protection ensemble.

Advancement Handbook for DC3

General DC <i>Skill Area</i>	CHEMICAL, BIOLOGICAL, AND RADIOLOGICAL (CBR) DEFENSE
A <i>skill</i> you are expected to perform from the General Skill Area above:	Maintain and inspect protective clothing and equipment
<i>Knowledge</i> you should have to perform this skill:	Recall requirements for the inspection and proper stowage of protective clothing.
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • U.S. Navy CBR Defense U.S. Marine Corps NBC Defense Handbook, OPNAV P-86-1-95 • NSTM 070, Nuclear Defense At Sea And Radiological Recovery Of Ships After Nuclear Weapons Explosion, S9086-CD-STM-010/CH-070 • NSTM 470, Shipboard BW/CW Defense And Countermeasures, S9086-QH-STM-010/CH-470 • Surface Ship Survivability, NWP 3-20.31
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about requirements for proper stowage and the inspection of protective clothing. Also, questions about the hazards that can break down, tear, or rip protective clothing if care is not properly exercised to maintain it while in use.

Advancement Handbook for DC3

General DC <i>Skill Area</i>	CHEMICAL, BIOLOGICAL, AND RADIOLOGICAL (CBR) DEFENSE
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform the duties of personnel decontamination and material decontamination team member
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the duties of personnel decontamination and material decontamination team members to include the following:</p> <ul style="list-style-type: none"> • Measure and record radiation exposure of RADIAC detectors • Clean, inspect, and test RADIAC detector chargers • Operate RADIAC detector chargers • Set up decontamination (DECON) stations • Inspect and inventory DECON stations • Test DECON showers • Set up and inspect contamination control areas (CCA) • Perform shipboard CBR decontamination • Perform personnel CBR decontamination
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • U.S. Navy CBR Defense/U.S. Marine Corps NBC Defense Handbook , OPNAV P-86-1-95 • NSTM 070, Nuclear Defense At Sea And Radiological Recovery Of Ships After Nuclear Weapons Explosion , S9086-CD-STM-010/CH-070 • NSTM 470, Shipboard BW/CW Defense And Countermeasures , S9086-QH-STM-010/CH-470 • Surface Ship Survivability , NWP 3-20.31
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about CBR operations, survey techniques and procedures, clothing requirements, and decontamination/contamination control procedures for ships and personnel.

Advancement Handbook for DC3

General DC <i>Skill Area</i>	CHEMICAL, BIOLOGICAL, AND RADIOLOGICAL (CBR) DEFENSE
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform the duties of internal and external survey team member
<i>Knowledge</i> you should have to perform this skill:	<p>Recall the duties and responsibilities required of a internal and external survey team member to include the following:</p> <ul style="list-style-type: none"> • Inspect chemical agent detection kits • Test radiation, detection, indication, and computation (RADIAC) detectors • Operate RADIAC detectors • Test and operate RADIAC computer-indicators • Calibrate RADIAC monitoring devices • Organize CBR defense monitoring teams • Perform chemical monitoring and surveying • Perform radiological monitoring and surveying
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • U.S. Navy CBR Defense U.S. Marine Corps NBC Defense Handbook, OPNAV P-86-1-95 • NSTM 070, Nuclear Defense At Sea and Radiological Recovery of Ships After Nuclear Weapons Explosion, S9086-CD-STM-010/CH-070 • NSTM 470, Shipboard BW/CW Defense And Countermeasures, S9086-QH-STM-010/CH-470 • Surface Ship Survivability, NWP 3-20.31
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about the duties and responsibilities required of a internal and external survey team member to include CBR operations, survey techniques and procedures.

Advancement Handbook for DC3

General DC <i>Skill Area</i>	DAMAGE CONTROL CENTRAL
A <i>skill</i> you are expected to perform from the General Skill Area above:	Direct damage control parties during casualties and drills
<i>Knowledge</i> you should have to perform this skill:	<p>Recall actions required to properly conduct DC casualties and drills to include the following:</p> <ul style="list-style-type: none"> • Use of damage control console (DCC) or activation station to: (1) start and stop fire pumps, (2) open and close firemain valves, (3) start and stop ventilation systems, (4) set and monitor the setting of material conditions • Read and coordinate damage control plates • Instruct shipboard personnel in the operation of: (1) installed and portable DC equipment, (2) the use of protective clothing, (3) the operations of CBR defense equipment, (4) DC tactics and procedures
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NSTM 555, Surface Ship Firefighting, S9086-S3-STM-010/CH-555V1 • U.S. Navy CBR Defense U.S. Marine Corps NBC Defense Handbook, OPNAV P-86-1-95 • NSTM 070, Nuclear Defense At Sea And Radiological Recovery Of Ships After Nuclear Weapons Explosion, S9086-CD-STM-010/CH-070 • NSTM 470, S9086-QH-STM-010/CH-470 Shipboard BW/CW Defense And Countermeasures, S9086-QH-STM-010/CH-470 • NSTM 079, Vol.2, Damage Control-Practical Damage Control, S9086-CN-STM-020/CH-079,V2 • Surface Ship Survivability, NWP 3-20.31

<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about fire fighting and damage control teams. This includes the duties they perform and the equipment and procedures they use.
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Advancement Handbook for DC3

General DC <i>Skill Area</i>	TECHNICAL ADMINISTRATION
A <i>skill</i> you are expected to perform from the General Skill Area above:	Update and maintain damage control logs, records, and reports and perform necessary duties during all damage control operations in accordance with current ship's instructions
<i>Knowledge</i> you should have to perform this skill:	<p>Update and maintain damage control logs, records, and reports and perform necessary duties during all damage control operations in accordance with current ship's instructions to include the following:</p> <ul style="list-style-type: none"> • Review damage control plates • Update closure logs • Compute daily draft reports • Update DCC/CCS logs • Update PMS records • Maintain orders for the sound and security watch
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NSTM 079, Vol. 2, Damage Control- Practical Damage Control, S9086-CN-STM-020/CH-079,V2 • Surface Ship Survivability, NWP 3-20.31 • OPNAVINST 3120.32
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about readiness conditions, setting of, and the modifications of material conditions. Also questions about proper log procedures and requirements.

Advancement Handbook for DC3

General DC <i>Skill Area</i>	ENVIRONMENTAL PROTECTION
A <i>skill</i> you are expected to perform from the General Skill Area above:	Conduct heat stress survey
<i>Knowledge</i> you should have to perform this skill:	<p>Recall requirements and procedures for conducting heat stress surveys in accordance with the Heat Stress Program to include the following:</p> <ul style="list-style-type: none"> • Record dry-bulb temperature readings from the hanging dry-bulb thermometer at watch or work locations. • Taking dry-bulb temperature readings using the WGBT meter.
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Navy Occupational Safety and Health (NAVOSH) Program Manual For Forces Afloat, OPNAV Instruction 5100.19C
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about recording dry-bulb temperature readings from hanging dry-bulb thermometers and taking dry-bulb temperature readings using the WGBT meter.

Advancement Handbook for DC3

General DC <i>Skill Area</i>	ENVIRONMENTAL PROTECTION
A <i>skill</i> you are expected to perform from the General Skill Area above:	Safely handle hazardous material (HAZMAT)
<i>Knowledge</i> you should have to perform this skill:	<p>Recall requirements and procedures for hazardous material (HAZMAT) to include the following:</p> <ul style="list-style-type: none"> • Review HAZMAT user's guide • Review HAZMAT inventories • Review material safety data sheets (MSDS) • Clean and inspect HAZMAT waste containers • Inspect HAZMAT storage areas
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Surface Ship Survivability, NWP 3-20.31 • Navy Occupational Safety and Health (NAVOSH) Program Manual For Forces Afloat, OPNAV Instruction 5100.19C • Hazardous Material (HAZMAT) User's Guide • NSTM Chapter 670, Stowage, Handling, and Disposal of Hazardous General Use Consumables
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about the Hazardous Material (HAZMAT) Safety Program.

Advancement Handbook for DC3

General SW <i>Skill Area</i>	ENVIRONMENTAL PROTECTION
A <i>skill</i> you are expected to perform from the General Skill Area above:	Perform hazardous material (HAZMAT) inventories
<i>Knowledge</i> you should have to perform this skill:	Recall the procedures for hazardous material (HAZMAT) identification, handling, and storage.
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Surface Ship Survivability, NWP 3-20.31 • Navy Occupational Safety and Health (NAVOSH) Program Manual For Forces Afloat, OPNAV Instruction 5100.19C • Hazardous Material (HAZMAT) User's Guide • NSTM Chapter 670, Stowage, Handling, and Disposal of Hazardous General Use Consumables
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about the procedures for hazardous material (HAZMAT) identification, handling, and storage.

Part 2

Advancement Handbook for DC2

Advancement Handbook for DC2

General DC <i>Skill Area</i>	FIRE FIGHTING
A <i>skill</i> you are expected to perform from the General Skill Area above:	Operate atmospheric test equipment in accordance with PMS
<i>Knowledge</i> you should have to perform this skill:	Recall procedures for the safe operation of atmospheric test equipment.
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • Planned Maintenance System, OPNAVINST 4790.4 (series) • NSTM 074 VOL.3, Gas Free Engineering S9086-CH-STM-030/CH-074
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about various types of atmospheric test equipment and the operation of the equipment..

Advancement Handbook for DC2

General DC <i>Skill Area</i>	Chemical, Biological, and Radiological (CBR) Defense
A <i>skill</i> you are expected to perform from the General Skill Area above:	Direct Chemical, Biological, And Radiological Operations
<i>Knowledge</i> you should have to perform this skill:	<p>Recall procedures for conducting chemical, biological, and radiological operations.</p> <ul style="list-style-type: none"> • Direct CBR defense monitoring teams • Compute radiological time-intensity plots • Update radiological time-intensity plots • Compute stay times in fallout areas
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • U.S. Navy CBR Defense/U.S. Marine Corps NBC Defense Handbook, OPNAV P-86-1-95 • Surface Ship Survivability, NWP 3-20.31 • NSTM 070, Nuclear Defense At Sea And Radiological Recovery Of Ships After Nuclear Weapons Explosion, S9086-CD-STM-010/CH-070 • NSTM 470, Shipboard BW/CW Defense And Countermeasure, S9086-QH-STM-010/CH-470
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be asked questions about the procedures for radiological time-intensity plots and the computation of stay times in fallout areas. Also, questions about the proper procedures for directing CBR monitoring teams and conducting interior and exterior surveys.

Advancement Handbook for DC2

General DC <i>Skill Area</i>	DAMAGE CONTROL/CENTRAL CONTROL STATION
A <i>skill</i> you are expected to perform from the General Skill Area above:	Compute effects of weight shifts on ship's stability
<i>Knowledge</i> you should have to perform this skill:	Recall procedures for computing the effects of weight shifts on a ship's stability.
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NSTM 079, Vol.1, Damage Control, Stability and Buoyancy, S9086-CN-STM-010/CH079V1 • NSTM 096, Weights And Stability, S9086-C6-STM-010/CH-096 • Surface Ship Survivability, NWP 3-20.31
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on computing the effects of weight shifts on ship's stability in various given scenarios.

Advancement Handbook for DC2

General DC <i>Skill Area</i>	TECHNICAL ADMINISTRATION
A <i>skill</i> you are expected to perform from the General Skill Area above:	Maintain and update engineering records, master CCOL, and all damage control books and directives.
<i>Knowledge</i> you should have to perform this skill:	<p>Recall requirements and procedures for maintaining and updating records, books, and directives that regulate damage control to include the following:</p> <ul style="list-style-type: none"> • Engineering Department training records • Damage control directives • Master damage control books • Master CCOL
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NSTM 079, Vol.2, Damage Control-Practical Damage Control, S9086-CN-STM-020/CH-079,V2 • Surface Ship Survivability, NWP 3-20.31 • NSTM 555, Surface Ship Firefighting S9086-S3-STM-010/CH-555V1
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on the maintenance and updating of records, books, and directives that regulate damage control standards.

Advancement Handbook for DC2

General DC <i>Skill Area</i>	SHIPBOARD DAMAGE CONTROL TRAINING
<i>A skill you are expected to perform from the General Skill Area above:</i>	Conduct training to qualify damage control training team (DCTT) members
<i>Knowledge you should have to perform this skill:</i>	<p>Recall requirements and procedures for conducting training to qualify (DCTT) members to include the following:</p> <ul style="list-style-type: none"> • Qualification requirements for damage control training team DCTT members • Evaluate DC training drills • Monitor DC training programs • Schedule DC training programs • Develop DC exercises
<i>References you should study to gain the knowledge you need to perform this skill:</i>	<ul style="list-style-type: none"> • NSTM 079, Vol.2, Damage Control Practical Damage Control, S9086-CN-STM-020/CH-079,V2 • NSTM 079, Vol.3, Damage Control Engineering Casualty Control, S9086-CN-STM-030/CH-079 • Surface Ship Survivability, NWP 3-20.31 • NSTM 555, Surface Ship Firefighting, S9086-S3-STM-010/CH-555V1
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	Requirements and procedures for conducting training to qualify DCTT members.

Part 3

Advancement Handbook for DC1

Advancement Handbook for DC1

General DC Skill Area	DAMAGE CONTROL CENTRAL/CENTRAL CONTROL STATION
A skill you are expected to perform from the General Skill Area above:	Compute effects of buoyancy, gravity, and ship's stability due to weight additions, deletions, battle damage, and repairs and properly document all results and make all appropriate updates to damage control selective records
Knowledge you should have to perform this skill:	<p>Recall procedures for computing the effects of buoyancy, gravity, and ship's stability due to weight additions, deletions, battle damage, and repairs and properly document all results and make all appropriate updates to damage control selective records to include the following:</p> <ul style="list-style-type: none"> • Compute and plot stability curves • Calculate effects of damage on ship's stability • Compute effects of buoyancy and gravity on ship's stability • Update records
References you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NSTM 079, Vol.1, Damage Control Stability and Buoyancy, S9086-CN-STM-010/CH-079,V1 • NSTM 096, Weights and Stability, S9086-C6-STM-010/CH-096 • Surface Ship Survivability, NWP 3-20.31
Exam Expectations. These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the procedures for computing the effects of buoyancy, gravity, and ship's stability due to weight additions, deletions, battle damage, and repairs and properly document all results and make all appropriate updates to appropriate records.

Advancement Handbook for DC1

General DC <i>Skill Area</i>	TECHNICAL ADMINISTRATION
A skill you are expected to perform from the General Skill Area above:	Prepare and maintain CBR defense, darken ship bills, and DC equipment test and inspection reports
Knowledge you should have to perform this skill:	<p>Recall requirements and procedures for preparing and maintaining the following:</p> <ul style="list-style-type: none"> • CBR defense bills • Darken ship bills • DC equipment test and inspection reports
References you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NSTM 079, Vol. 2, Damage Control Practical Damage Control, S9086-CN-STM-020/CH-079,V2 • Standard Organization and Regulations of the U.S. Navy OPNAVINST 3120.32C • Surface Ship Survivability, NWP 3-20.31
Exam Expectations. These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about maintaining CBR defense and darken ship bills. Also, questions about preparing DC equipment test and inspection reports.

Part 4

Advancement Handbook for DCC

Advancement Handbook for DCC

General DC <i>Skill Area</i>	DAMAGE CONTROL CENTRAL/CENTRAL CONTROL STATION
A <i>skill</i> you are expected to perform from the General Skill Area above:	Compute effects of emergency repair on ship's stability
<i>Knowledge</i> you should have to perform this skill:	Recall procedures for computing the effects of emergency repair on ship's stability due to compartment flooding.
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NSTM 079, Vol.1, Damage Control Stability and Buoyancy, S9086-CN-STM-010/CH-079,V1 • NSTM 096, Weights and Stability, S9086-C6-STM-010/CH-096
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect to be able to compute various effects of emergency repairs on ship's stability.

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General DC <i>Skill Area</i>	TECHNICAL ADMINISTRATION
A <i>skill</i> you are expected to perform from the General Skill Area above:	Prepare, update, review, and monitor various bills, programs, reports, and casualty reports.
<i>Knowledge</i> you should have to perform this skill:	<p>Recall procedures for preparing, updating, reviewing, and monitoring DC bills, programs, reports, and casualty reports to include the following:</p> <ul style="list-style-type: none"> • Update battle, rescue and assistance bills • Update cold weather and toxic gas bills • Prepare and review casualty reports (CASREP) • Prepare and review casualty corrections (CASCOR) • Prepare and review quality assurance (QA) reports • Conduct QA audits and program inspections and monitor QA program for compliance • Update various damage control records
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> • NSTM 079, Vol. 2, Damage Control Practical Damage Control, S9086-CN-STM-020/CH-079,V2 • Standard Organization and Regulations of the U.S. Navy, OPNAV INST 3120.32C • Surface Ship Survivability, NWP 3-20.31 • Quality Assurance Program, CINCLANTFLT/CINCPACFLTINST 4790.3 • Operational Reports, NWP 1-03.1
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about preparing, updating, reviewing, and monitoring DC bills, programs, reports, and casualty reports.

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General DC <i>Skill Area</i>	ENVIRONMENTAL PROTECTION
A <i>skill</i> you are expected to perform from the General Skill Area above:	Monitor Hearing Conservation and Heat Stress Programs
<i>Knowledge</i> you should have to perform this skill:	Recall requirements and procedures for monitoring hearing conservation and heat stress programs.
<i>References</i> you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none">• Navy Occupational Safety And Health (NAVOSH) Program Manual For Forces Afloat, OPNAV Instruction 5100.19C
<i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:	You can expect questions about the requirements and procedures for monitoring hearing conservation and heat stress programs.

Appendix 1

References Used in This Advancement Handbook

Rating	Short Title	Long Title	Chapters/ Paragraphs	Stocking Point
DC3	NSTM 079Vol.2, S9086-CN-STM-020/CH-079V2	Naval Ships Technical Manual, Chapter 079, Vol. 2 Practical Damage Control	N/A	Note 1
	NAVSEA SS100-AC-MMA-010/AUTO-MAN	Range Guard Fire Extinguishing Systems	N/A	Note 1
	NSTM 505 S9086-RK-STM-010	Piping Systems	N/A	Note 1
	NSTM 555 S9086-S3-STM-010/CH 555.V1	Surface Ship Fire Fighting	N/A	Note 1
	Planned Maintenance System, OPNAVINST 4790.4 (series)	Planned Maintenance System (PMS)	N/A	Note 2
	NSTM 077 S9086-CL-STM-010/CH-077	Personnel Protection Equipment	N/A	Note 1
	NAVSEA BOOKLET S9169-AW-DCB-010	Damage Control Water Tight Closures Inspection, Maintenance and Repair Booklet	N/A	Note 1
	NWP 3-20.31	Surface Ship Survivability	N/A	Note 1
	NSTM 593 S9086-T8-STM-010/CH-593	Pollution Control	N/A	Note 1
	NSTM 9880 NAVSEA 0901-LP-884-0004	Damage Control Compartment Testing and Inspection	N/A	Note 1
	OPNAV P-86-1-95	U.S. Navy CBR Defense and U.S. Marine Corps NBC Defense Handbook	N/A	Note 2
	NSTM 070 S9086-CD-STM-010-/CH-070	Nuclear Defense At Sea and Radiological Recovery of Ships After Nuclear Weapons Explosion	N/A	Note 1
	NSTM 470 S9086-QH-STM-010/CH-470	Shipboard BW/CW Defense and Countermeasures	N/A	Note 1
	OPNAV INSTRUCTION 5100.19C	Navy Occupational Safety and Health (NAVOSH) Program Manual for Forces Afloat	N/A	Note2
	OPNAV PUBLICATION P45-110	Hazardous Material (HAZMAT) User's Guide	N/A	Note 2

	NSTM Chapter 670,	General Stowage, Handling, and Disposal of Hazardous General Use Consumables	N/A	Note 1
	Sewage Disposal Operating Sequencing System (SDOSS)	N/A	N/A	Note 5
DC2	OPNAVINST 4790.4(SERIES)	Planned Maintenance System	N/A	Note 2
	NSTM 074, S9086-CH-STM-030/CH-074V3	Gas Free Engineering	N/A	Note 1
	OPNAV P-86-1-95	U.S. Navy CBR Defense /U.S. Marine Corps NBC Defense Handbook	N/A	Note 2
	NSTM 070, S9086-CD-STM-010/CH-070	Nuclear Defense At Sea and Radiological Recovery of Ship's After Nuclear Weapons Explosions	N/A	Note 1
	NSTM 470, S9086-QH-STM-010/CH-470	Shipboard BW/CW Defense and Countermeasure	N/A	Note 1
	NSTM 079, V1 S9086-CN-STM-010/CH079V1	Damage Control, Stability and Buoyancy	N/A	Note 1
	NSTM 096, S9086-C6-STM-010/CH.096	Weights and Stability	N/A	Note 1
	NSTM 079, V2, S-9086-CN-STM-020/CH-079V2	Practical Damage Control	N/A	Note 1
	NWP 3-20.31	Surface Ship Survivability	N/A	Note 1
	NSTM 555, S9086-S3-STM-010/CH-555V1	Surface Ship Firefighting	N/A	Note 1
	NSTM 079, V3, S9086-CN-STM-030/CH-079	Engineering Casualty Control	N/A	Note 1
DC1	NSTM 079 V1, S9086-CN-STM-010/CH079V1	Damage Control, Stability and Buoyancy	N/A	Note 1
	NSTM 096, S9086-C6-STM-010/CH.096	Weights and Stability	N/A	Note 1
	NWP 3-20.31	Surface Ship Survivability	N/A	Note 1
	NSTM 079, V2, S-9086-CN-STM-020/CH-079V2	Practical Damage Control	N/A	Note 1
	OPNAVINST 3120.32C	Standard Organization and Regulations of the U.S. Navy	N/A	Note 2
DCC	NSTM 079 V1, S9086-CN-STM-010/CH079V1	Damage Control, Stability and Buoyancy	N/A	Note 1
	NSTM 096, S9086-C6-STM-010/CH.096	Weights and Stability	N/A	Note 1
	NWP 3-20.31	Surface Ship Survivability	N/A	Note 1
	OPNAVINST 3120.32C	Standard Organization and Regulations of the U.S. Navy	N/A	Note 2

	NSTM 079, V2, S-9086-CN-STM-020/CH-079V2	Practical Damage Control	N/A	Note 1
	CINCLANTFLT/CINCPACFLTINST 4790.3	Quality Assurance Program	N/A	Note 4
	NWP 1-03.1	Operational Reports	N/A	Note 1
	OPNAV INSTRUCTION 5100.19C	Navy Occupational Safety and Health (NAVOSH) Program Manual for Forces Afloat	N/A	Note 2

LEGEND:

Note 1 - To order, MILSTRIP to NAVICP PHILA (Stock No. from NAVSUP P2002) or via INTERNET <http://www.nll.navsup.navy.mil>

Note 2 - INTERNET <http://www.nll.navsup.navy.mil> or <Http://neds.nebt.daps.mil/Directives/dirindex.html>

Note 3 - To order, submit request on DD Form 1425 0102-LF-009-7400

Note 4 - To order, send request to : Commanding Officer, Submarine Maintenance Engineering, Planning and Procurement (SUBMEPP) Activity, Attn: Code 1814, P.O. Box 7002, Portsmouth, NH 03802-7002

Note 5 . Naval Surface Warfare Center, Carderock Division, NSWCCD, Code 943, Philadelphia Naval Business, Philadelphia, PA 19112-5083